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Abstract

In a film-forming process of depositing gaseous molecules each composed of plural atoms onto a substrate or reacting the gaseous molecules with the constituting elements of the substrate to form a compound film onto the substrate, the plasma, having excited inert gaseous molecules with higher metastable excited states than the ones required to dissociate the gaseous molecules into their elements and the gaseous molecules, is generated and then, the gaseous molecules are dissociated into their elements before being deposited into the substrate. As a result, dissociation of the gaseous molecules onto the substrate is not required, leading to lowering the temperature of the film-forming process.

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